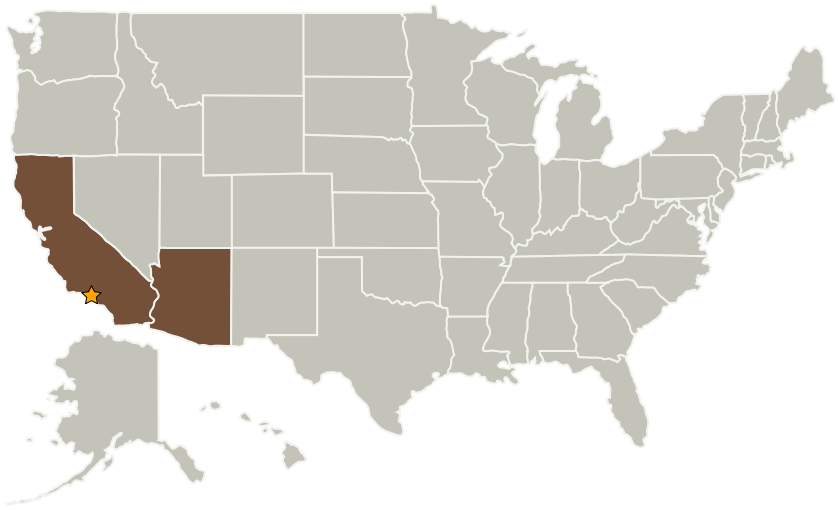
Advanced Cathode Material For High Energy Density Lithium-Batteries, Phase I

Completed Technology Project (2005 - 2005)

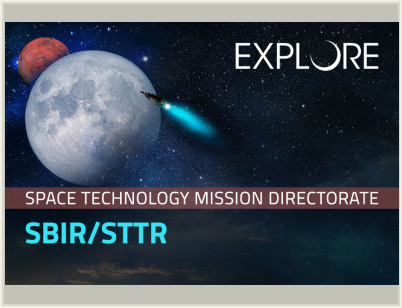
Project Introduction

Advanced cathode materials having high red-ox potential and high specific capacity offer great promise to the development of high energy density lithium-based batteries. A novel advanced cathode material having higher capacity and operating voltage than conventional CFx cathode is proposed to develop high energy density lithium batteries. The proposed cathode material will be synthesized and characterized using different analytical and electrochemical techniques. Several prismatic design lithium pouch cells will be developed with the proposed cathode material and lithium anode in carbonate-based lithium hexafluorophosphate electrolyte and will be tested to demonstrate the proof-of-concept.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Jet Propulsion Laboratory(JPL)	Lead Organization	NASA Center	Pasadena, California
MER Corporation	Supporting Organization	Industry	Tucson, Arizona



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
Arizona	California

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigators:

Seng C Tan
Raouf O Loutfy

Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
  - TX03.2 Energy Storage
    - TX03.2.1 Electrochemical: Batteries